

Notice of Allowability	Application No.	Applicant(s)	
	09/890,302	MOTOWAKI ET AL.	
	Examiner	Art Unit	
	Adolfo Nino	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 6/2/04.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ The drawings filed on 02 June 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Allowable Subject Matter

~~Claims 1-14 are allowed.~~

The following is an examiner's statement of reasons for allowance:

With respect to claims 1-3, as noted in Office Action filed 3/2/04, is the limitation therein of "wherein by exhausting said inside space when sealing, a sealing glass is made broken down and a clearance gap between said substrates is controlled".

With respect to claim 4, the cited prior art does not disclose, teach or suggest the limitation of "a surrounding area of said couple of substrates is sealed by an amorphous sealing glass, wherein a gas unnecessary for a discharge operation is exhausted from said inside space under a condition that said amorphous sealing glass is located in a temperature range exceeding its softening point and no more than its working point".

With respect to claim 5, the cited prior art does not disclose, teach or suggest the limitation of "one of said sealing glasses having one individual softening point sealing said surrounding area, and another of said sealing glasses having another individual softening point and disposed adjacent to and substantially parallel with said one of said sealing glasses so as to individually effect sealing of at least the same said surrounding area".

With respect to claim 6, the cited prior art does not disclose, teach or suggest the limitation of a sealing glass having a protruding portion having a curvature radius being formed on an overall periphery of said sealing glass at its inside space when sealing a couple of substrates.

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With respect to claim 7, the cited prior art does not disclose, teach or suggest the limitation of a sealing glass having a convex shape with respect to the inside space at both its inside space end part and its outside space end part.

With respect to claim 8, the cited prior art does not disclose, teach or suggest the limitation of at least at one portion of a surrounding area of a couple of substrates, a concentration of crystal grains of filler is larger at an inside space end of a sealing glass than at other portions.

With respect to claim 9, the cited prior art does not disclose, teach or suggest the limitation of a glass layer having a heat resistance higher than a sealing glass being formed over an entire periphery of the inside space of a couple of substrates sealed by the sealing glass so as to be adjacent to an inside space end part of the sealing glass.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments, see pages 8-16 of the REMARKS section of Amendment, filed 6/2/04, with respect to independent claims 4, 5, 6, 8 and 9 have been fully considered and are persuasive. The rejections of claims 4-13 have been withdrawn.

Examiner agrees with Applicants' arguments of claim 4 stating that Sherk utilizes a crystallized sealing glass and not an amorphous sealing glass as required by claim 4.

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Sherk utilizes a crystallized sealing glass in order to match the thermal expansion characteristics of the sealant with those of the substrate glasses and only after the assembly has been completely processed is the assembly evacuated, but in the present invention, the unnecessary gas is exhausted while sealing.

Arguments with regards to claim 5, the Examiner agrees that Nagano et al. do not disclose, teach or suggest a double sealing by different sealing glasses of at least the same surrounding area of a couple of substrates as now recited in claim 5.

Claim 6 claims a sealing glass having a protruding portion having a curvature radius formed on an overall periphery of said sealing glass at its inside space, hence Tang does not disclose, teach or suggest said protruding portion formed on an overall periphery of the sealing glass at its inside space.

Arguments with regards to claim 7, the Examiner agrees that Tang does not disclose, teach or suggest a sealing glass having a convex shape with respect to the inside space at both its inside space end part and its outside space end part.

Arguments with regards to claim 8, the Examiner agrees that in Otsuka et al.'s sealing glass the filler grains are added so as to be dispersed uniformly in the glass, and in the present invention the filler is pulled toward the discharge space and then the filler concentration at the discharge space becomes higher as being claimed in claim 8.

Arguments with regards to claim 9, the Examiner agrees that Nagano et al. do not disclose, teach or suggest a glass layer having a heat resistance higher than a sealing glass being formed over an entire periphery of said inside space so as to be

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adjacent to an inside space end part of said sealing glass. The glass layer of Nagano et al. is only used at ports 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolfo Nino whose telephone number is (571) 272-1981. The examiner can normally be reached on M-F (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A Reichard can be reached on (571) 272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AN


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